LC1D256F7

TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 25 A - 110 V AC coil

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Main

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Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	<= 690 V AC 25...400 Hz for power circuit <= 300 V DC for power circuit
[Ie] rated operational current	25 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit 40 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	11 kW at 380...400 V AC 50/60 Hz 15 kW at 500 V AC 50/60 Hz 15 kW at 660...690 V AC 50/60 Hz 5.5 kW at 220...230 V AC 50/60 Hz 11 kW at 415...440 V AC 50/60 Hz
Motor power hp	2 hp at 115 V AC 50/60 Hz for 1 phase motors 3 hp at 230/240 V AC 50/60 Hz for 1 phase motors 5 hp at 200/208 V AC 50/60 Hz for 3 phases motors 7.5 hp at 230/240 V AC 50/60 Hz for 3 phases motors 15 hp at 460/480 V AC 50/60 Hz for 3 phases motors 20 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC 50/60 Hz
Control circuit voltage	110 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	40 A at <= 60 °C for power circuit 10 A at <= 60 °C for signalling circuit
Irms rated making capacity	450 A at 440 V for power circuit conforming to IEC 60947 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	450 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	120 A <= 40 °C 1 min power circuit 240 A <= 40 °C 10 s power circuit 380 A <= 40 °C 1 s power circuit 50 A <= 40 °C 10 min power circuit 100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit
Associated fuse rating	40 A gG at <= 690 V coordination type 2 for power circuit 63 A gG at <= 690 V coordination type 1 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	2 mOhm at 50 Hz - Ith 40 A for power circuit
[Ui] rated insulation voltage	600 V for power circuit certifications CSA

	600 V for power circuit certifications UL 690 V for power circuit conforming to IEC 60947-4-1 690 V for signalling circuit conforming to IEC 60947-1 600 V for signalling circuit certifications CSA 600 V for signalling circuit certifications UL
Electrical durability	1.65 Mcycles 25 A AC-3 at Ue <= 440 V 1.4 Mcycles 40 A AC-1 at Ue <= 440 V
Power dissipation per pole	3.2 W AC-1 1.25 W AC-3
Protective cover	With
Mounting support	Plate Rail
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 CSA C22.2 No 14
Product certifications	BV CCC CSA DNV GL GOST RINA UL LROS
Connections - terminals	Control circuit : lugs-ring terminals - external diameter: 8 mm Power circuit : lugs-ring terminals - external diameter: 10 mm
Tightening torque	Control circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm screw : M3.5 Control circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 screw : M3.5 Power circuit : 2.5 N.m - on lugs-ring terminals - with screwdriver flat Ø 8 mm screw : M4 Power circuit : 2.5 N.m - on lugs-ring terminals - with screwdriver Philips No 2 screw : M4
Operating time	4...19 ms opening 12...22 ms closing
Safety reliability level	B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1 B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
Mechanical durability	15 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

Complementary

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Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc at 60 °C drop-out 50/60 Hz 0.8...1.1 Uc at 60 °C operational 50 Hz 0.85...1.1 Uc at 60 °C operational 60 Hz
Inrush power in VA	70 VA at 20 °C (cos ϕ 0.75) 60 Hz 70 VA at 20 °C (cos ϕ 0.75) 50 Hz
Hold-in power consumption in VA	7.5 VA at 20 °C (cos ϕ 0.3) 60 Hz 7 VA at 20 °C (cos ϕ 0.3) 50 Hz
Heat dissipation	2...3 W at 50/60 Hz
Auxiliary contacts type	Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1 Type mirror contact (1 NC) conforming to IEC 60947-4-1
Signalling circuit frequency	25...400 Hz
Minimum switching current	5 mA for signalling circuit
Minimum switching voltage	17 V for signalling circuit
Non-overlap time	1.5 ms on de-energisation (between NC and NO contact) 1.5 ms on energisation (between NC and NO contact)
Insulation resistance	> 10 MOhm for signalling circuit

Environment

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IP degree of protection	IP2x front face conforming to IEC 60529

Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3
Ambient air temperature for operation	-5...60 °C
Ambient air temperature for storage	-60...80 °C
Permissible ambient air temperature around the device	-40...70 °C at Uc
Operating altitude	3000 m without derating in temperature
Fire resistance	850 °C conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Vibrations contactor open 2 Gn, 5...300 Hz Vibrations contactor closed 4 Gn, 5...300 Hz Shocks contactor closed 15 Gn for 11 ms Shocks contactor open 8 Gn for 11 ms
Height	85 mm
Width	45 mm
Depth	92 mm
Product weight	0.37 kg

Contractual warranty

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Period	18 months